Air Quality Improvement Plan Guidelines

Part One – General City Requirements

The City of Chula Vista Growth Management Ordinance, Municipal Code Section 19.09.050B, requires an Air Quality Improvement Plan (AQIP) to be submitted with all Sectional Planning Area (SPA) Plans, or if a SPA plan is not required, Tentative Maps. The Growth Management Program further requires an Air Quality Improvement Plan for all major development projects (50 dwelling units or greater, or commercial or industrial projects with equivalent air quality impacts to a residential project of 50 or more dwelling units). (See Part Four for an explanation of EDU's.)

The AQIP shall provide an analysis of air pollution impacts which would result from the project, and will be required to demonstrate the best available design to reduce vehicle trips, maintain or improve traffic flow, reduce vehicle miles traveled, including implementation of appropriate traffic control measures, and other means of reducing emissions (direct or indirect) from the project, as well as defining a program to monitor compliance.

To further enhance opportunities to improve air quality and energy conservation, the action measures contained in the City's Carbon Dioxide (CO_2) Reduction Plan must be addressed in the AQIP.

Part Two – Air Quality Improvement Plan Requirements for Residential and Non-Residential or Mixed-Use Projects Subject to AQIP Requirements

The following two options are available to meet the AQIP requirement. The Developer may choose to participate in the Chula Vista GreenStar Building Efficiency Program or evaluate the project using the Chula Vista CO_2 INDEX model including any necessary site plan modifications.

1. CHULA VISTA GREENSTAR BUILDING EFFICIENCY PROGRAM.

   Residential Projects
   Consistent with the CO_2 Reduction Plan, the Developer agrees to exceed the California 2001 Title 24, Part 6, Energy Efficiency Standards (CA 2001 Title 24) by 15% in the majority (50% or greater) of the residential units in their project.

   The Developer may prepare a streamlined AQIP consistent with the format and content identified in the Air Quality Improvement Plan Outline for Residential Projects Participating in the GreenStar Building Efficiency Program as more particularly described in Attachment A.

   Non-Residential Projects
   Consistent with the CO_2 Reduction Plan, the Developer agrees to exceed the California 2001 Title 24, Part 6 requirements by 10% in the majority (50% or greater) of the non-residential structures in their project.

   The Developer may prepare a streamlined AQIP consistent with the format and content identified in the Air Quality Improvement Plan Outline for Non-Residential Projects Participating in the GreenStar Building Efficiency Program as more particularly described in Attachment B.

   Mixed-Use Projects
   The Developer agrees to exceed the California 2001 Title 24, Part 6 requirements in the construction of the majority (50% or greater) of the structures in the project. The required level of CA 2001 Title 24 exceedence is determined by land use within the project, consistent with the standards above.

The Developer may prepare a streamlined AQIP consistent with the format and content identified in the Air Quality Improvement Plan Outline for Residential and Non-Residential Projects Participating in the GreenStar Building Efficiency Program as more particularly described in Attachments A and B.

2. CHULA VISTA CO_2 INDEX MODEL

   The Developer agrees to model the project using the Chula Vista CO_2 INDEX model. A three-party agreement between the City of Chula Vista, the Consultant providing the CO_2 INDEX modeling, and the Developer shall be required. The Developer is responsible for the costs of retaining the Consultant to perform the CO_2 INDEX modeling services.

   The AQIP document shall be consistent with the format and content identified in the Air Quality Improvement Plan Outline for Projects Using the CO_2 INDEX Model as more particularly described in Attachment C.

Part Three – Alternate Air Quality Measures and Future Air Quality Improvement Technology

The Developer may submit an Air Quality Improvement Plan containing alternate air quality and energy conservation measures, including building programs and technology not identified in the AQIP Guidelines. The Developer may also submit an AQIP using CO_2 INDEX modeling at a broader scope including the General Development Plan level. Alternate measures must be accompanied by data demonstrating, to the satisfaction of the City, comparable energy and air quality improvements are achieved.

Part Four – Using Equivalent Dwelling Units (EDU's) to Determine Air Quality Improvement Plan Requirements for Non-Residential and Mixed Use Projects

The following equivalencies apply to non-residential or mixed use projects:

- Commercial projects of 12 or more acres.
- Industrial projects of 24 or more acres.
- Mixed Use projects with a cumulative threshold equal to that of 50 or more dwelling units.

Infill or redevelopment projects that provide information, to the satisfaction of the Director of Planning and Building or his/her designee, indicating the net threshold increase resulting from the proposed land use does not exceed the impact of 50 dwelling units, will not be required to prepare an Air Quality Improvement Plan.

Adopted June 10, 2003

Air Quality Improvement Plan Outline
Attachment A

RESIDENTIAL AND MIXED USE PROJECTS PARTICIPATING IN THE GREENSTAR BUILDING EFFICIENCY PROGRAM

The following outline sets forth the format and content of the Air Quality Improvement Plan (AQIP) for projects participating in the Chula Vista GreenStar Building Efficiency Program.

1. Developer must agree to exceed the California 2001 Title 24, Part 6, Energy Efficiency Standards (CA 2001 Title 24, effective 6/1/01) by 15% in the majority (50% or greater) of residential dwelling units through participation in a building efficiency program such as ComfortWise or CA Energy Star, or develop a custom building efficiency program using construction methods that exceed CA 2001 Title 24 requirements by 15%.

   Mixed-Use projects must exceed the CA 2001 Title 24 standards in the construction of the majority (50% or greater) of the structures in the project. The required level of CA 2001 Title 24 exceedence is determined by land use within the project consistent with the residential and non-residential requirements outlined in the AQIP Guidelines.

   In the event that changes to energy and building code standards occur subsequent to the effective date of the Air Quality Improvement Plan Guidelines, building efficiency programs sponsored or endorsed by state agencies or utility companies will meet the requirement for participation in the Chula Vista GreenStar Building Efficiency Program regardless of the level of California Title 24, Part 6 exceedence. Custom building efficiency programs consistent with future organized building programs mentioned above will be permitted in the GreenStar Building Program.

2. Developer may submit an AQIP in letter form containing the following information:

   - Project Description.
   - Commitment to participate in the Chula Vista GreenStar Building Program.
   - Identify the specific building efficiency program to be used, or design a custom building program that exceeds CA 2001 Title 24 requirements by 15%. Custom building programs must be accompanied by data confirming CA 2001 Title 24 exceedence to the satisfaction of the Director of Planning and Building or his/her designee.
   - Total number of dwelling units committed to participation in the GreenStar Program.
   - Project features incorporated in the land use design that further enhance energy conservation and reduce harmful emissions and air pollutants, such as pedestrian and transit friendly features, compact development and diversity of uses.

Adopted June 10, 2003

Air Quality Improvement Plan Outline
Attachment B

NON-RESIDENTIAL PROJECTS PARTICIPATING IN THE GREENSTAR BUILDING EFFICIENCY PROGRAM

The following outline sets forth the format and content of the Air Quality Improvement Plan (AQIP) for non-residential projects participating in the Chula Vista GreenStar Building Efficiency Program.

1. Developer must agree to exceed the California 2001 Title 24, Part 6, Energy Efficiency Standards (CA 2001 Title 24, effective 6/1/01) by 10% in the majority (50% or greater) of the non-residential structures in the project through participation in a building efficiency program such as SDG&E Savings By Design, or similar non-residential building efficiency programs or develop a custom building efficiency program using construction methods that exceed CA 2001 Title 24 requirements by 10%.

   In the event that changes to energy and building code standards occur subsequent to the effective date of the Air Quality Improvement Plan Guidelines, building efficiency programs sponsored or endorsed by state agencies or utility companies will meet the requirement for participation in the Chula Vista GreenStar Building Efficiency Program regardless of the level of California Title 24, Part 6 exceedence. Custom building efficiency programs consistent with future organized building programs mentioned above will be permitted in the GreenStar Building Program.

2. Developer may submit an AQIP in letter form containing the following information:

   - Project Description.
   - Commitment to participate in the Chula Vista GreenStar Building Efficiency Program.
   - Identify the specific building efficiency program to be used, or design a custom building program that exceeds CA 2001 Title 24 requirements by 10%. Custom building programs must be accompanied by data confirming CA 2001 Title 24 exceedence to the satisfaction of the Director of Planning and Building or his/her designee.
   - Number of structures committed to participation in the building efficiency program.
   - Project features that are incorporated in the land use design to further enhance energy conservation and reduce harmful emissions and air pollutants.

Adopted June 10, 2003

Air Quality Improvement Plan Outline
Attachment C

PROJECTS USING THE CO_2 INDEX MODEL

The following outline sets forth the format and content of the Air Quality Improvement Plan (AQIP) for projects using the CO_2 INDEX Model. In accordance with the City of Chula Vista Growth Management Program, the AQIP shall demonstrate the best available design to reduce vehicle trips, maintain or improve traffic flow, reduce vehicle miles traveled, identify means of reducing emissions (direct or indirect) from the project, and define a program to monitor compliance. To further enhance opportunities to improve air quality and energy conservation, the action measures contained in the City's Carbon Dioxide (CO_2) Reduction Plan and the City's Air Quality Improvement Plan INDEX pilot study results must be considered in the AQIP.

All projects using the CO_2 INDEX model must be submitted to the City in ArcView format in both hard copy and electronic format.

In addition, the project AQIP must incorporate the following numbering system consistent with the Master Planned Communities SPA Plan Outline. For projects that do not require a SPA Plan a comparable numbering sequence is to be used. (e.g. II.7.1, II.7.2 replaced with 1., 2. etc.)

SECTION II.7 AIR QUALITY IMPROVEMENT PLAN

II.7.1 Executive Summary

Provide a brief summary of the Air Quality Improvement Plan. Particular emphasis shall be given to the air quality improvement measures identified for implementation in the project and the results of the modeling effort.

II.7.2 Introduction

II.7.2a. Purpose

This section will describe the purpose of providing an Air Quality Improvement Plan. Provide a brief explanation of the regulatory framework identifying the authority and scope of the City of Chula Vista, State, and Federal regulations. Where applicable, explain how the project has addressed regulations and include a brief discussion of the following:

- Chula Vista's Growth Management Ordinance requires all major development projects (50 dwelling units or greater, or commercial or industrial projects with equivalent air quality impacts to a residential project of 50 or more dwelling units) to prepare an Air Quality Improvement Plan (AQIP).
- The Carbon Dioxide (CO_2) Reduction Plan provides for further consideration of land use and energy efficient measures in new development to reduce CO_2 emissions, energy consumption and air pollution. The AQIP should include implementation of applicable measures identified in the CO_2 Reduction Plan.

II.7.3 Project Description

Project description including land use information, acreage, number of housing units, unit types and mixed-use areas. Include the Site Utilization Plan illustration from the Sectional Planning Area (SPA) Plan document or similar site plan illustration for those projects that do not file a SPA Plan.

II.7.4 Air Quality Action Measures

List the following action measures as identified in the INDEX Pilot Study report and the CO_2 Reduction Plan. Include an explanation that the actions measures were used to develop the indicators for the CO_2 INDEX model and that the indicators address the energy efficiency and emission reduction aspects of the proposed development.

LAND USE

a. Compact development – Minimize sprawl.
b. Density – Increase intensity of land use.
c. Land Use Diversity – Mix and variety of uses.
d. Orientation toward pedestrian and bicycles.
e. Orientation toward transit.

BUILDINGS & LANDSCAPING

f. Energy efficient building construction – Reduce energy use by exceeding Title 24 building standards.
g. Solar Use – Solar thermal applications and power generation.
h. Vegetation – Uptakes air pollutants and greenhouse gases and provides shading to reduce temperatures.

TRANSPORTATION

Important components of Transportation Action Measures include dense street networks, completeness of sidewalks and direct routes to popular destinations.

i. Pedestrian Facilities – Circulation design and improvements for pedestrian use.
j. Bicycle Facilities – System design and improvements to encourage bicycle use.
k. Transit Facilities – Transit system design and improvements to circulation system.

INFRASTRUCTURE

l. Water Use – Land planning that reduces water consumption. Reference the Water Conservation Plan for the project.

II.7.5 Project Evaluation

Illustrate the CO_2 INDEX baseline and initial project scores.

As identified in the CO_2 INDEX Pilot Study, the twelve key indicators listed in the table below have the greatest potential to achieve favorable scores based on project design. Initial project scores must reflect improvements at or beyond the threshold scores in two out of four indicators in each element: Land Use, Transportation and Environment.

Element	Key Indicators	Units of Measure	Threshold Scores
Land Use	Land Use Mix	0 to 1 index	.4 or higher
	Land Use Balance	0 to 1 index	.75 or higher
	Neighborhood Completeness	% of key uses	50 or higher

	Internal Connectivity for Vehicles	0 to 1 index	.75 or higher
Transportation	Pedestrian Network Coverage	Pedestrian Routes/streets Ratio	1.0 or higher
	Pedestrian Route Directness	Walkable distance vs straight-line ratio	1.5 or lower
	Transit Service Coverage	Stops/sq.mile	10 or higher
	Daily Auto Driving	Veh-mi./day/capita	20 or less
Environment	Park Proximity	Distance to closest park	1200 ft. or lower
	Total Residential Energy Use	MMBtu/yr./capita	24 or lower
	Total Nonresidential Energy Use	MMBtu/yr./emp.	12 or less
	Total Res. & Nonresidential Energy Use	MMBtu/yr./person (capita + emp)	70 or less

If the initial project scores do not reflect improvements at or beyond the threshold in two or more of the key indicators in each element then the Developer must make modifications to the project design and have the alternate proposal run through the CO_2 INDEX model.

Illustrate the results of the modified SPA Plan or site plan proposal (second run project scores) including an analysis of air quality improvement, energy conservation, and CO_2 reduction achieved.

The Developer may propose alternate measures. The proposed alternate Air Quality measures must be accompanied by data demonstrating, to the satisfaction of the Director of Planning and Building, comparable energy and air quality improvements are achieved.

II.7.6 Implementation Measures

List the Action Measures to be implemented in the project including any efforts involving merchant builders and any other public or private agencies.

Reference the section and page of any mitigation measures contained in the environmental documents that relate to air quality and construction emissions impacts.

Reference the technical reports such as URBEMIS7G emissions analysis contained in the environmental documents.

References
Appendix

Adopted June 10, 2003